

# PATENT ABSTRACTS OF JAPAN

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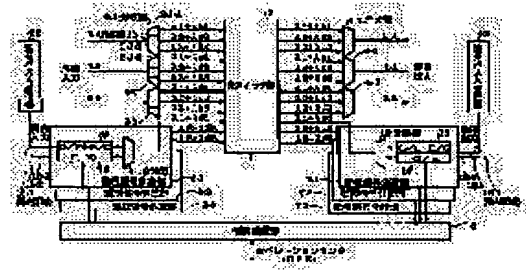
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## (54) OPTICAL WAVELENGTH MULTIPLEX NETWORK SYSTEM

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To reduce the error rate of main signals owing to the modulation of monitor signals by providing an optical signal multiplexer having comb shape transmission areas arranged in equal frequency interval and respectively and individually allocating the main signals and the monitor signals to the transmission areas.

**SOLUTION:** The multiplexing of the main signals  $\lambda_1$ - $\lambda_3$  from a succeeding node with the monitor signals  $\lambda_{\#1}$ - $\lambda_{\#3}$  is inputted to a demultiplexer 2 and they are demultiplexed into multiplex signals  $\lambda_1+\lambda_{\#1}$ ,  $\lambda_2+\lambda_{\#2}$  and  $\lambda_3+\lambda_{\#3}$  and transferred to an optical switch part 3. The demultiplexer 2 is constituted of a Fabry-Perot filter provided with a comb shape characteristic for repeating the transmission areas by equal frequency interval or the like and the main signals  $\lambda$  and the monitor signals  $\lambda_{\#}$  are set to positions aligned to prescribed interval ITU grids. An optical switch part 3 transmits the prescribed multiplex signal to the multiplexer 4 in accordance with a change-over signal from a controller part 8, synthesizes it with the multiplex signal from another wave length pass and transfers it to the succeeding node with an optical multiplex link. Thus, the error rate of the signal is reduced, the main signal and the monitor signal is made to be one group and, then, transmission is executed.



## LEGAL STATUS

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